

Between lines 21 and 22, insert Detailed Description of Preferred

Embodiments of the Invention.

IN THE CLAIMS

Amend the claims as follows:

Cancel, without prejudice, claims 1-20, and replace with new set of claims 21-46, as follows:

21. (New) A drying device for removing moisture from moisture-containing materials placed inside the drying device, the drying device comprising:
- a) a kiln compartment (1), having a plurality of side walls (11,12,13,14), a top wall (100), and a bottom wall (101), that define a kiln volume (6), for holding material to be dried, the kiln compartment (1) further having at least one loading door (131) through which the material to be dried is placed into the kiln compartment (1);
 - b) at least one system vent (111), movably positioned in at least one side wall (11,12,13,14), and communicating between the kiln compartment (1) and the exterior of the drying device;
 - c) a heat condensation device (2), including a housing (20), containing a condensation unit (21), a heating unit (22), and at least one ventilator (25), positioned in at least one side wall (11,12,13,14) opposite to and different from the side wall (11,12,13,14) in which the at least one system vent (111) is positioned;
 - d) an air deflector (3), positioned in an upper zone of the kiln volume (6) in the kiln compartment (1);

e) a tunnel-shaped air shaft (1000), extending horizontally along the kiln compartment (1) proximate to the top wall (100), and forming an air passage (30) between the air deflector (3) and the system vent (111); and

f) a ventilation unit (40), positioned in the tunnel-shaped air shaft (1000), for drawing air into the tunnel-shaped air shaft (1000); such that a volume of dry air is circulated in the kiln compartment (1) by a plurality of ventilators to absorb moisture from the material to be dried.

22. (New) The drying device according to claim 21, further comprising at least two aerating and exhausting shafts (121,122), and a micro climate vent (1211), which is attached to a side wall (12) of kiln compartment (1), such that both aerating and exhausting shafts (121,122) are connected to the micro climate vent (1211), proximate to the air deflector (3), and such that the aerating and exhaustion shaft (121) is positioned such that it communicates between the kiln compartment (1) proximate to the top (100) thereof and the exterior of the drying device, and such that the aerating and exhaustion shaft (122) is positioned such that it communicates between the kiln compartment (1) proximate to the bottom (101) thereof and the exterior of the drying device,

23. (New) The drying device according to claim 21, further comprising at least two aerating and exhausting shafts (121,122), and at least two micro climate vents (1211,1221), which are attached to a side wall (12) of the kiln

compartment (1), such that both aerating and exhausting shafts (121,122) are connected to micro climate vent (1211) arranged adjacent to the wall (12) of the kiln compartment (1).

24. (New) The drying device according to claim 21, further comprising at least one additional ventilation unit (7), including ventilator (71), positioned in the kiln volume (6) on an adjustable support (72), for enabling angular dispersion of air flow, and such that the ventilation unit (7) is in an off mode when placed parallel to a side wall and is in an on mode when placed nonparallel to a side wall.

25. (New) The drying device according to claim 22, further comprising at least one additional ventilation unit (7), including ventilator (71), positioned in the kiln volume (6) on an adjustable support (72), for enabling angular dispersion of air flow, and such that the ventilation unit (7) is in an off mode when placed parallel to a side wall and is in an on mode when placed nonparallel to a side wall.

26. (New) The drying device according to claim 23, further comprising at least one additional ventilation unit (7), including ventilator (71), positioned in the kiln volume (6) on an adjustable support (72), for enabling angular dispersion of air flow, and such that the ventilation unit (7) is in an off mode when placed

parallel to a side wall and is in an on mode when placed nonparallel to a side wall.

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27. (New) The drying device according to claim 21, wherein the system vent (111) is positioned on the side wall (11) of the kiln compartment (1), adjacent to the door (131) of the kiln compartment (1), the system vent being capable of alternatively assuming a closed position and an open position, such that when the system vent (111) is in the closed position, there is enabled an internal circulation of air flow from the tunnel-shaped air shaft (1000) in the area between the top (100) of the kiln compartment (1) and the air deflector (3), passing through the air passage (30) between the air deflector (3) and the wall adjacent to the door (131) in the kiln volume (6) in a direction towards the self adjustable vent (31) and under the air deflector (3) towards the heat condensation unit (2), since in the case when the system vent (111) is opened the air flow is passing from the tunnel shaped air shaft (1000) through at least two gaps formed by opening the system vent (111) the air is blown out of kiln compartment (1) in open space on the upper side trough at least one gap and simultaneously the fresh air is sucked from outside directly into the kiln volume (6) through at least one lower gap.

28. (New) The drying device according to claim 21, wherein the ventilation unit (40) further comprising a plurality of ventilators (41,42,43,44), which are positioned in the tunnel-shaped air shaft (1000) between the air deflector (3)

and the top wall (100) of the kiln compartment (1), such that at least one of the ventilators (41,42,43,44) is equipped with at least one corresponding heating unit (430, 440), provided for heating the air in the tunnel-shaped air shaft (1000).

29. (New) The drying device according to claim 28, wherein there are four ventilators (41,42,43,44), arranged in two pairs of two, arranged side-by-side, such that a first pair of ventilators (41,42) is positioned in the tunnel-shaped air shaft (1000) towards one end of the kiln compartment (1), and a second pair of ventilators (43,44) is positioned in the tunnel-shaped air shaft (1000) towards an opposite end of the kiln compartment (1), and further such that two of the ventilators (43,44) are provided with corresponding heating units (430,440).

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30. (New) The drying device according to claim 21, further comprising a plurality of carriage stacking units (5) for containing the material to be dried, each carriage stacking unit (5) having a plurality of vertical elements (51), spaced apart from one another, and a plurality of horizontal elements (52), spaced apart from one another.

31. (New) The drying device according to claim 30, wherein at least one of the carriage stacking units (5) is equipped with wheels (50).

32. (New) The drying device according to claim 30, wherein the carriage stacking units (5) are stackable one on top of another.

33. (New) The drying device according to claim 31, wherein the carriage stacking units (5) are stackable one on top of another.

34. (New) The drying device according to claim 21, further comprising a condensate outlet pipe (201), mounted in the housing (20) of the heat condensation device (2), for outlet of condensate formed by the cooling of moist air in the condensation unit (21), a compressor (23), and a throttling valve (24), such that the condensation unit (21), the heating unit (22), the compressor (23) and the throttling valve (24), form a closed circuit through which a thermally conductive fluid is circulated.

35. (New) The drying device according to claim 21, wherein the kiln compartment (1) is constructed to have standardized dimensions of a container for international container transports.

36. (New) The drying device according to claim 21, wherein the vent (31) of the air deflector (3) is self-adjusting.

37. (New) The drying device according to claim 21, further comprising a radiation device (8), placed in an interior of the kiln compartment (1), proximate to the venting and exhausting shafts (121,122).

38. (New) The drying device according to claim 37, wherein the radiation device (8) is an emitter of ultra-violet rays.

39. (New) The drying device according to claim 21, further comprising at least two magnets (9), which are positioned in the kiln compartment (1).

40. (New) The drying device according to claim 39, wherein the magnets (9) are permanent-magnets.

41. (New) The drying device according to claim 40, wherein the at least two permanent magnets (9) in the interior of the kiln compartment (1), are positioned adjacent to the exhausting and aerating shafts (121,122) and the air deflector (3), and provide a bipolar magnetic field.

42. (New) The drying device according to claim 29, wherein the distance between adjacent vertical distant elements (51), viewed in a horizontal direction, is shorter than the distance between adjacent side vertical supports (52).

43. (New) The drying device according to claim 26, wherein the vertical distance elements (51) and the horizontal distance elements (52) of the stacking unit (5) are spaced apart from one another a sufficient distance and layers of material to be dried placed inside the stacking unit (5) are spaced apart from one another a sufficient distance to form an air gap between distance elements (51,52) and

between layers of the material to be dried, to enable circulating drying air to flow between the distance elements and between layers of material to be dried.

44. (New) The drying device according to claim 42, wherein the vertical distance elements (51) and the horizontal distance elements (52) of the stacking unit (5) are spaced apart from one another a sufficient distance and layers of material to be dried placed inside the stacking unit (5) are spaced apart from one another a sufficient distance to form an air gap between distance elements (51,52) and between layers of the material to be dried, to enable circulating drying air to flow between the distance elements and between layers of material to be dried.

45. (New) The drying device according to claim 21, wherein the microclimate vent (1211) is actuated when there is an increase in the moisture content of the air at the top (100) of the kiln compartment (1), and such that the vent (1211) operatively cooperates with air shafts (121,122), such that it is connected with the kiln volume (6) by the air shaft (122), through which air is exhausted; and such that it is connected with air shaft (121) whereby when a pressure differential exists, fresh outside air is taken-in to the area (10'), and further such that when the microclimate vent (1211) is inactivated, the drying process is isolated from external atmospheric air and internal air circulation is generated in the kiln compartment (1).

46. (New) The drying device according to claim 21, wherein the microclimate vent (1211) is actuated when there is an increase in the moisture content of the air at the top (100) of the kiln compartment (1), and such that the vent (1211) operatively cooperates with air shafts (121,122), such that it is connected with the kiln volume (6) by the air shaft (122), through which air is exhausted; and such that it is connected with air shaft (121) whereby when a pressure differential exists, fresh outside air is taken-in to the area (10'), and further such that when the microclimate vent (1211) is inactivated, the drying process is isolated from external atmospheric air and internal air circulation is generated in the kiln compartment (1).--